

Warm-Up MSA Skill Review

WRITE YOUR HOMEWORK IN YOUR PLANNER!!!

Solve the following equations:

1) $3x + 9 = 18$

2) $x/14 + 12 = 39$

3) $2(4 - x) + 3 = 10$

Simplify the following expressions by Combining Like Terms:

4) $3x - 4y + 9x + 12$

5) $6x^2 - 7y + 13x + 15y - 10x^2$

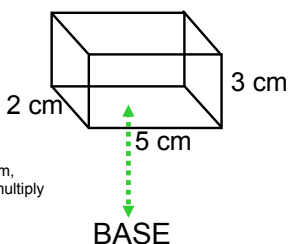
How can we figure out how much these boxes can hold?



RECTANGULAR PRISMS

The **VOLUME** of a prism is how much the prism can hold. For a rectangular prism, all you do is multiply the area of the base by the height.

$V = Bh$
 Height
 Area of base



Since the base of a **RECTANGULAR** Prism, to find the area of the base, you need to multiply the length times the width, so...

$B = 5 \times 2 = 10 \text{ cm}^2$

Then, multiply the area of the base by the height of the prism!

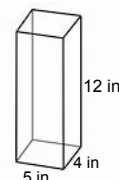
$10 \times 3 = 30 \text{ cm}^3$

So, to find the Volume of a rectangular prism, multiply the length x width x height.

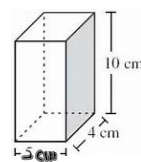
$V = lwh$

Let's Practice!

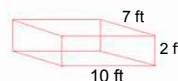
1)



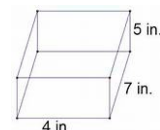
2)



3)



4)

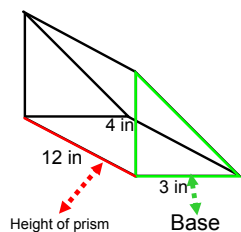


TRIANGULAR PRISMS

To find the VOLUME of a TRIANGULAR prism, you use the same basic formula of:

$V = Bh$ or Volume = Area of Base x Height of prism.

REMEMBER: The bases of a prism are the two parallel and congruent faces! The bases of a TRIANGULAR PRISM are the two TRIANGLES!!! The base shape is also in the name of the figure!!! Also, the HEIGHT of the prism is the distance between the two bases.



To find the area of a triangle, you multiply the base of the triangle by the height of the triangle and divide by 2!

$$B = (3 \times 4) / 2 = 12/2 = 6 \text{ in}^2$$

Then multiply the area of the base by the height of the prism:

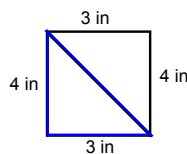
$$6 \times 12 = 72 \text{ in}^3$$

The volume of the triangular prism is 72 in³

BUT WHY DOES IT WORK???

Why does it work for a triangle?

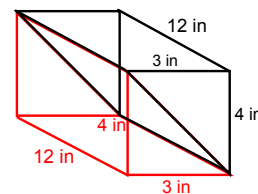
Is a triangle really half of a rectangle?



If you take the original triangle and flip it over, it makes a rectangle! Therefore, a triangle is half of a rectangle!

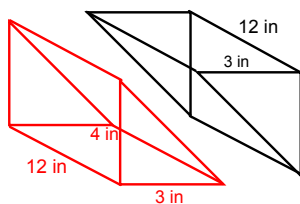
What about a triangular prism?

Is a triangular prism really half of a rectangular prism?

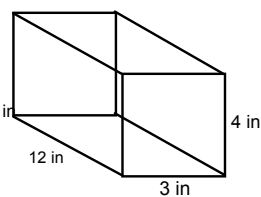


FIND THE VOLUME OF EACH AND COMPARE...

TRIANGULAR PRISM
(Find volume of RED one)



RECTANGULAR PRISM



Is the volume of the RED TRIANGULAR PRISM half of the volume of the RECTANGULAR PRISM??